

PRESENTATION BENT IRON WORK DESIGN WITH THIS NUMBER.

Hobbies

• A Weekly Journal •

For Amateurs of Both Sexes.

No. 8. VOL. I.

DECEMBER 7, 1895.

ONE PENNY.

Wood Carving for Amateurs.

Stamps Week by Week.

Electricity,—

The Induction Coil—How to Make and Use it.

Fretworking, Inlaying and Overlaying.

Photographic Notes and Hints.

Bazaars and How to Make them Successful.

Venetian Bent Iron Work.

The Magic Lantern.

Cycling, Football, and Athletic Notes.

Weekly Presentation Design.

Prize Competitions, Correspondence, Etc.

STAMPS

Week by Week.

A Philatelic Causerie by PERCY C. BISHOP,

Joint Editor of the "STAMP COLLECTORS' FORTNIGHTLY" Ex-Editor of "THE PHILATELIC JOURNAL"
and "PHILATELIC REVIEW OF REVIEWS;" General Secretary of the LONDON PHILATELIC CLUB.



THE Philatelic community has been agitated during the past few months by much heated discussion as to the merits of the various stamp catalogues now on the market. A well known English firm began it all by calling into question the integrity of a German rival. They accused the German firm of deliberately marking certain very rare stamps at low prices in order to be able to buy cheaply themselves.

Since then the English firm have been charged with the very same manipulation. And thus it ever will be, so long as our stamp catalogues are published by stamp dealers. Such a publication, whether it emanates from English, German, or American dealers, can never be regarded as anything more than the trade circular of the firm publishing. The ideal catalogue—when it comes—will be issued by someone who is not a dealer at all, but a collector having an inside knowledge of the condition of the stamp market, and one who is not animated by any interested motive.

Into the merits of this battle of the cataloguers I shall not go, because it is at best only a dealers' quarrel. But there are points about the latest edition of Senf's catalogue which entitle it to special notice. For instance, in the pages devoted to Japan, there is a small paragraph calculated to save many a Philatelist both vexation and loss. In Japan the forging of postage

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No. 1.

stamps is permitted, or, rather, "regulated" by Government. Any Jap may turn a more or less honest penny by this means, provided he places somewhere on the stamps Japanese characters, signifying "Fac-Simile." These characters are

reproduced in a magnified form in "Senf's Catalogue," and I now give them here. Scan any Japans that come your way for these characters which at once mark the stamp out as bogus. Sometimes the characters are very small, quite microscopic in fact. The complacent authorities in the land of chrysanthemums make no stipulation as to size.

—:O:—

Edinburgh has had a Philatelic Exhibition, promoted by the Edinburgh and Leith Philatelic Society. Some 3,000 stamps were shown, mostly rarities. Mr. F. Barnard showed the gem of the show—an unsevered pair of the rd. English "V.R."

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No. 2.

sheets of twelve (two rows of six) without perforation around the edge. Thus, each stamp should be imperf on at least one side. Another test is the perforation, which is very rough in the originals. Still there are many reprints imperforate on one or two sides, roughly perforated on the others. To be brief, there is no infallible test, and I advise all readers to eschew unused Samoans altogether.

THE PLATE NUMBERS OF ENGLISH STAMPS—Continued.

THE THREE-HALFPENCE VALUE.

The plate numbers of the English 1½d. stamp, a section of which I illustrate by way of showing the position of the plate number on the scroll work at the side, are very easily described, there



being only two numbers, viz., plates 1 and 3. Plate 2 was prepared, but never used. On the score of rarity there is "not a pin to choose," as the saying goes, between plates 1 and 3 of the three-halfpence value.

NEW ISSUES OF STAMPS.

* Items for this department will be gratefully received from any Philatelic readers who happen to receive early information of new issues, or of impending changes in the postal arrangements of any country.

AUSTRIA.—The present stamps of 1 and 2 florins are to be changed in colour, the design remaining the same. The 1 florin will be yellow-green, and the 2 florins pale lilac.

SEYCHELLES.—It is stated that the current Seychelles stamps are to be surcharged, as a consequence of the fall in the value of the rupee. The 13c. will be surcharged 5c.; the 45c., 20c.; the 48c., 40c.; and the 30c. envelopes, 20c.

SPAIN.—The design of the new Spanish issue is annexed. The values and colours are: 1 centimo, green; 2 c., blue green; 5 c., light blue; 10 c., red; 15 c., violet; 20 c., emerald green; 25 c., blue; 30 c., grey; 40 c., chocolate; 50 c., rose; 75 c., amarills; 1 peseta, light violet; 4 p., carmine, and 10 p., deep carmine. There are thus fourteen varieties, exclusive of postcards and envelopes, of which I have not yet received particulars. The stamps are available, not only for postage, but also for telegraphic and service purposes.



No. 3.

HINTS TO BEGINNERS.

THE WATERMARKS OF BRITISH AND COLONIAL STAMPS.

Since dealing with the subject of Watermarks in this column, I have received a number of queries bearing on the subject. "A.J.B." is going to examine all his stamps for Watermarks, "but," says he, "how am I to commence? Some have no Watermarks at all, I believe; which are these please?" Now to help "A.J.B." and other young readers who may be in the same plight. I am going to give a list of Watermarks found on the stamps of Great Britain and British Colonies.

GREAT BRITAIN.—Crown (three varieties: "small," "large," and "new"); Garter (three varieties: Heraldic, Flowers, or "Emblems"); Spray of Rose; Maltese Cross; Anchor, and Orb or "Globe."

BARBADOS.—Star, large and small; a Crown and letters "C.C." (Crown Colony); Crown and letters "C.A." (Crown Agent).

BRITISH BECHUANALAND.—Crown and "C.C.," Crown and "C.A.," and Cabled Anchor.

CAPE OF GOOD HOPE.—Crown and "C.C.," Crown and "C.A.," and Cabled Anchor.

CEYLON.—Star; Crown and "C.C.," Crown and "C.A."

FALKLAND ISLES.—Crown and "C.A.," horizontally and sideways.

GIBRALTAR.—Crown and "C.A."

GRENADA.—Star and Crown and "C.A."

INDIA.—A Coat of Arms surmounted by the words "Stamp Office," an Elephant's Head, and a Star.

JAMAICA.—Pineapple, Crown and "C.C.," Crown and C.A."

NATAL.—Star; Crown and "C.C.," Crown and "C.A."

NEW SOUTH WALES.—Large Numerals; letters "N.S.W.," Crown and "N.S.W."

NEW ZEALAND.—Star; letters "N.Z.," Star and "N.Z."

QUEENSLAND.—Star; words "Queensland Postage Stamps" in script lettering; the word "Queensland" in Roman lettering; Crown and letter "Q."

ST. VINCENT.—Star; Crown and "C.A."

SOUTH AUSTRALIA.—Star; Crown and S.A.," Star with broader points.

TASMANIA.—Star; Numeral of Value; letters "T.A.S."

VICTORIA.—Star; Value in Words; Double-lined Figures of Value; Single-lined ditto; "V." and Crown.

WESTERN AUSTRALIA.—Swan; Crown and "C.C.," Crown and "C.A."

Antigua, Bahamas, Bermuda, British Guiana, British Honduras, Cyprus, Dominica, Gold Coast, Hong Kong, Labuan, Lagos, Mauritius, Montserrat, Nevis, St. Christopher, St. Helena, St. Lucia, Straits Settlements, Trinidad, and Virgin Islands all have the "Crown "C.C." and Crown "C.A." Watermarks.

TO STAMP COLLECTORS

NEW

Illustrated Price List

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FISHER, TITLEY & Co., Stamp Importers, BATH.



CHAP. VIII.—INLAYING—Continued.

FOR general Inlaying purposes wood one-sixteenth of an inch thick will be found very convenient, as several varieties may be used at once. When this is practised, some attention should be paid to the grain of the wood. In a small husk, or leaf, for instance (as Fig. 37), the grain should lie up and down, not across. With berries, again (Fig. 38), such a wood as Bird's Eye Maple is suitable, as the figuring takes a circular form, and is therefore well adapted to the object.

With Borders and any purely con-

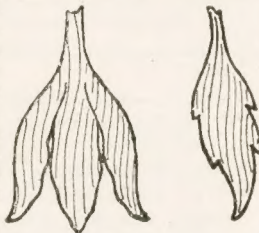


Fig. 37.



Fig. 38.

ventional Ornament (Fig. 39) a wood without any strongly marked grain is recommended. White Chestnut is perhaps the best for this purpose, but other suitable varieties may also be obtained.

With Table Tops, Small Cabinets, Doors, etc., a good effect can be secured by mere arrangement of the woods,



Fig. 39.

and without any actual sawing of Ornament. (See Fig. 40). The Fretworker must not imagine that this plan is easy. On the contrary, the greatest pains must be taken to preserve accuracy.

Satinwood and Tulip Bands, and Fancy Inlaid Stringings may be used in connection with this; but as these can only be satisfactorily worked when veneers are employed, or else run into the solid wood by machinery, it may be concluded that they are slightly beyond the powers of an average amateur, and consequently they are merely mentioned in passing. (Fig. 41.)

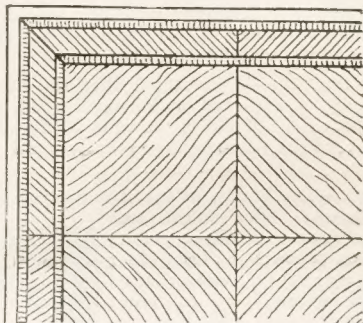


Fig. 40.

In all Inlay work use the finest Saws. There is a two-fold reason for this. In the first place, a thick Saw removes too much sawdust: that is, it cuts a broad line, and prevents the Ornament from fitting close. Again, Inlaid Designs must be sawn with the greatest nicety; every corner has to be taken sharp and clear, and this can only be done with a delicate blade. Those Fretworkers who have been accustomed to use Saws of a medium grade will find some difficulty at first in cutting with the finer ones, as it is less easy to keep closely to the line. A little practice, however, will set this right.

As a rule, polish the article when finished. As the surface is smooth and unbroken this may easily be done, and polish throws up the Inlay very much better than any Oil or Varnish.

An Inlaid article should be kept back from the sunlight, as strong heat often causes the Ornament to start.

INLAID OVERLAYS.

A word might here be said on what can be termed *Inlaid Overlay* work. The expression



Fig. 41.

is coined, so it is necessary to explain. In the case of a Box Lid, for example, one would often like to ornament both surfaces. Overlay work would appear well on the Lid top, but Inlaying would be more suitable for the under surface.

Here is the plan;—Say that Fig. 42 is the Lid, the outside of which is to be overlaid, and the inside Inlaid. The Box is to be made of one-eighth inch Walnut, and Tasso has been chosen



FIG. 42.

for the Ornament. Take the Tasso Wood, *three-sixteenths* of an inch thick, nail firmly to the Walnut, and after making all due preparations (transferring the Pattern, tilting the table, etc.), set to work with the intention of Inlaying the *three-sixteenths* inch wood into the *one-eighth* inch wood.

The Machine table must be tilted to an angle just sufficient to necessitate a slight pressure in fixing in the Tasso. When the Ornament has been cut out and placed in position, what is required is that on the under surface both woods should be flush, while above the Tasso will project exactly *one-sixteenth* of an inch. Thus there is the effect of Overlay above, and Inlay below.

The plan is well worth a trial, as the result is striking, and friends and acquaintances are thoroughly astonished at the Fretworker's ingenuity!

DRILLING FOR INLAYS.

A word of advice should here be given with regard to boring holes for the insertion of the Saw Blade. With ordinary Fretwork the size of the drill matters little, as the piece of wood containing the hole is always cut out. But with Inlaying the very finest drill must be used, for the simple reason that the hole is seen. At least it *will* be seen, unless it is extremely small or effectively hidden. Thus the hole should be drilled close to the Ornament, and if the background is of a darkly coloured wood all trace of any Saw insertion may be successfully removed by rubbing in a little sawdust and glue. If the background be very light and the Ornament dark, it is safer to drill a hole in the latter. It could, however, be done in the former, and then touched up with Chinese White and tinted to match the ground.

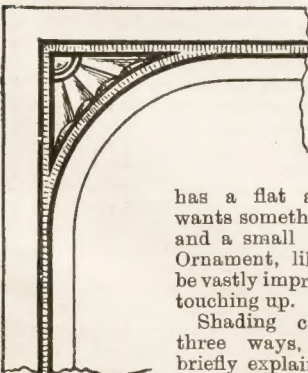


FIG. 43.

Sand—the finer the better—and place in an iron pot or strong tin box. Put this on the fire, and heat till the contents are rather warmer

SHADING INLAYS.

When Inlay work is much practised it is often necessary to do a little shading. If a leaf is large, it

has a flat appearance, and wants something to relieve it; and a small Sheraton corner Ornament, like Fig. 43, can be vastly improved with a little touching up.

Shading can be done in three ways, which will be briefly explained. The first is the well-known Burning method. Procure some fine

than the fingers can stand. Do not, however, make the Sand red-hot. When all seems right, take some odd scraps of wood, and try a few experiments till a satisfactory result is attained. When the hot Sand has the effect of producing a nice brown tint, without charring the edges, then the important work may be tackled. Take the Inlay, and plunge the part which is to be shaded for a moment in the Sand. Repeat the operation several times till the burning has given the wood a well graduated tone. Such woods as Maple, Satin, and White Chestnut are very suitable for this work.

Here it must be understood that only these bare instructions can be given. It is impossible to do more, as so much depends on the actual heat of the Sand, on the depth to which the wood is pressed, the time it is held in, and other matters. Before any serious work is attempted several preliminary trials should be made on smaller articles.

A second method of shading is by the use of ordinary water colours. Paint! Many readers will scorn the idea. Still, it can be mentioned, and the plan is worth trying. The article must first receive a coat of polish. If too glossy, rub gently with Glasspaper, or give it a touch of spirits. Then take the colours, and shade those Inlays which require it. Remember, the work is not to be *painted*. What is desired is a mere touch here and there to give the effect of Sand-burning. Use a little prepared Ox Gall with the colour, as the surface of the wood will be rather greasy with the polish, and be careful not to leave any brush marks.

The third method is etching. This is really artistic work. Most readers will have seen examples of finely etched and inlaid ivories in our National Museums. In this case the wood must again receive a rub with polish, or one or two coats of bleached Shellac dissolved in spirits, for if ink is put on the plain wood it will at once spread, and spoil the surface. Use good Chinese or Indian Ink, and apply with a moderately fine pen. With this method mere veining of leaves may be done, or—if the Fretworker is also an artist—the Inlays can be finished to a high degree. The simpler plan is recommended to those who have not had much experience in drawing.

When Inlays are coloured or etched, great care must be taken in afterwards applying the first coat of varnish or polish, as the colour and ink will easily be disturbed.

In many cases the amateur will shrink from trying to shade his Inlays lest he spoil the work. If he can succeed, however, in doing any one of these methods well, he will find it a striking improvement, as it greatly softens the whole effect, and blends everything together.

(To be continued.)

MAKE YOUR OWN FENDERS.

Three different Fender Top Patterns, One Ashpan Pattern, 1/6 free, or 6d. each. Kettle Stand and Iron Stand Pattern given to every purchaser.—TULLOCH, Dealer in Fretwork Materials, Millfield, Sunderland.

£20

TOBACCONISTS COMMENCING. See Illd. Guide & Catalogue (259 pgs.) 8d.. "How to open a Cigar Store, £20 to £2,000."—Tobacconists' Outfitting Co. (Reg.), 188, Euston Rd., London. N.B.—Shopfitters and showcase makers for all trades. (Over 50 years' reputation.) Mgr., H. Myers.



PHOTOGRAPHY

for Amateurs

NOTES OF THE WEEK.

IT is very gratifying to find that our offer to lend a few Lantern Slides is being appreciated. We shall be very pleased to help any readers of *Hobbies*, and hope that the idea mentioned in these columns of a Lantern Slide Exchange may be carried out.

We shall be glad to hear from workers with the Stereoscope. This apparatus places in the hands of anyone a method of viewing Photographic pictures which almost surpasses imagination. Stereoscopic effect is a revelation to those who have never looked through a Stereoscope,—all the objects in the picture stand out in natural relief, and give a most astonishing and beautiful result. We shall later on devote some space to the making of Stereoscopic Slides, the Stereoscope, and its uses.

Mr. Wade, a past President of the Manchester Amateur Photographic Association, recently delivered a lecture, at Liverpool, upon "Combination Printing," and demonstrated in a simple manner a method of introducing skies, foregrounds, or any desired objects into a picture by combining two or more negatives in the operation of printing. Mr. Wade emphasised the fact that great care was necessary in cutting out and fitting the masks to cover those portions of the negative not required in the print, and that accuracy in this respect was only to be obtained by great patience and by practice. Should any hobbyist want simple rules as to how such work should be done, we would advise the purchase of "Art Photography," by H. P. Robinson, price rs.* In this book full instructions and examples are given.

One of the most successful animal Photographers is Mr. Charles Reid, of Wisham, N.B. He has just published a book upon "Animals You Know." This book is intended to serve as a companion to a set of 84 Lantern Slides, copies of Mr. Reid's beautiful animal studies. The book is written in a bright and cheerful strain, and includes many excellent anecdotes about animals, mostly from the personal experience of the author.

A very popular form of enlarging Lantern is the "Cantilever." The illuminant for this has been generally an oil lamp, but an amateur, Mr. R. C. Gilmore, of Manchester, has adapted the incandescent gas burner to his "Cantilever" with excellent effect. The back of the oil vessel is cut away, and the hole where the oil burner fitted is enlarged, so that when the tray carrying the gas

burner attachment is put into the body of the lamp, the mantle of the incandescent burner comes near the right position for the condensers and chimney. There is no doubt but that the incandescent gaslight is an admirable illuminant for enlarging, owing to the intense whiteness of the light given when the mantle becomes incandescent.

Quite recently Col. H. H. Sealy contributed a paper to a provincial Photographic Society upon "The Selection of Subjects for Photography." In concluding a most interesting discourse he said:—"Any exhibition of paintings is full of subjects which will help to arrive at an idea of composition, light and shade, &c. You must have patience, and, above all, observation. When walking abroad, look round for subjects which will blend themselves to a pleasing effect, always remembering that the view which looks best to the eye will not always adapt itself to a Photograph. And when the suitable subject is found do not be in too great a hurry to take it. Study it first to see which is the best position to take it from, and at what time of day the light is most suitable; and, when all things are right, be bold and delay not. And, as a last and most essential word I say, keep your eyes open."

A correspondent, writing to *Photography* upon the question of charges for taking Photographs, writes in a post-script:—"I may add that a publishing firm recently commissioned a Photographer to take at least one hundred negatives in North and South Wales, and the price agreed upon was £100 and one guinea for every negative over the hundred, this sum to include all expenses except the plates and the carriage of the negatives which the firm paid. This appears to us that money may be made by those having a knowledge of Photography. The work of taking 100 negatives is not difficult or onerous. A man of judgment with some appreciation of subject, a knowledge of light and shade, might without difficulty, and in a short space, make a hundred exposures and earn his £100 whilst on a tour of say a fortnight or three weeks.

As a sequel to our remarks upon the Stereoscope, we are pleased to notice that Her Majesty the Queen has recently shown her appreciation of Photography by accepting from Mr. W. I. Chadwick, of Manchester, a beautifully made Stereoscope. The Queen we understand is having a set of views specially prepared in order that she may not only derive pleasure herself, but that those around her shall be initiated with a know-

* NOTE.—The publishers of *Hobbies* will supply a copy on receipt of Postal Order.

ledge of the wonders of Stereography. Mr. Chadwick is one of the greatest authorities upon this section of Photography, and also upon the application of Photography to the Microscope.

Mr. John A. Hodges, F.R.P.S., writing recently in a contemporary upon the "Colour" of a Lantern Slide, said:—"Colour in a Lantern Slide is very much a matter of taste, but at the present time there would appear to be a decided preference, both among Photographers and the non-photographic public, for warm colours." Although good taste will alone enable the reader to decide upon the colour most suitable for a particular subject, yet a rich warm Sepia Brown will be found to suit the generality of subjects, certainly equally as well as the more sombre shades of Grey and Black. In making Lantern Slides it is difficult for an amateur to maintain the same tone, and Mr. Hodges questions very much the desirability. With "warm tones" care must be taken not to tone too deeply; if this is done the illumination of the Slide upon the screen is impaired. There is no doubt that the public appreciate the tone of a slide, and are educated beyond the soot and whitewash order that prevailed as recently as ten years back. A Slide, which, looked at by transmitted light, appears a dirty yellowish-brown, will often give a good picture, and another, which, by the same test, is a soft brown, may be far too dense for effective projection.

Several attempts have been made from time to time to publish "Photographs of the Year." So far they have none of them been pronounced successes. The initial attempt was made some years back by the then Editor of the *Amateur Photographer*, and some dozen Photographs were reproduced by Woodbury Gravure. Similar portfolios have been issued from time to time, but they have not been a financial success, and it is a great question whether they ever satisfied the Editor. *Photograms* of 1895 is a work which supplies much excellent criticism upon the Photographs of the year, and in which are reproduced many of the Exhibition pictures, including Photographs from Japan, India, America, &c., &c.

In concluding the article on warm tones in Lantern Slides, which we have already referred to, Mr. Hodges gives the following formula in which hydro-quinine and eikonogen are both used:—

No. 1.		
Sulphite of Soda	...	1 ounce.
Ci ric Acid	...	20 grains.
Eikonogen	...	100 "
Hot Distilled Water	...	20 ounces.

Shake till dissolved and then add:—

Hydro-quinine	...	60 grains.
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No. 2.		
Caustic Soda	...	$\frac{1}{4}$ ounce.
Bromide Potash	...	10 grains.
Cold Distilled Water	...	20 ounces.

For use, add two parts of No. 1 to one part of No. 2, and if too energetic further dilute with water.

At the recent Royal Photographic Society's Exhibition, Mr. G. Davenport, Lanternist of the Society of Arts, showed a new form of optical Lantern adapted for use with his semi-automatic electric arc lamp. He also showed his patent curtain slide carriers; with this carrier the effect of a curtain descending to obscure the picture is obtained, and rising again a fresh view is disclosed. The slides are changed in the interval.

IMPORTANT NOTICE.

The Supply of Back Numbers

The first and second numbers of *Hobbies* having been long since sold out, while the demand for them shows but little sign of abatement, we have thought it advisable to have these numbers reprinted, so that recent Subscribers may be enabled to complete their volumes.

We hope to have them ready in the course of a few days. Copies may be obtained through any newsagent, price 1d. each, or direct from the publishers, price 1½d. post free.

Owing to the largely increasing number of annual subscribers, we have decided to suspend the rule relating to the non-supply of Presentation Supplements with back numbers till the end of the year. Thus, till December 31st, we shall give away the *Presentation Designs* with all back numbers.

Terms of Subscription

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Three Months (including postage)	...	1	8
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All letters relating to subscriptions or back numbers should be addressed to the Publisher of *Hobbies*, Bouverie House, Salisbury Square, London, E.C.

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ST. PAUL'S CATHEDRAL.

An illustrated description of a remarkable Design for a Fretwork Model of St. Paul's Cathedral will be found in *Hobbies* No. 1. We present a copy of this elaborate and strikingly original Design to everyone who sends postal orders for 6/6 for a year's subscription to *Hobbies*. The subscriber will thus receive by post every week for one year a copy of *Hobbies* with the usual Weekly Presentation Design, the value of which will never be less than threepence, and as a special present the Design for the model of St. Paul's, the price of which is half-a-crown. Any weekly subscriber who may wish for a copy of the St. Paul's Design can obtain one on sending a postal order for 2/6 to the Editor of *Hobbies*, Bouverie House, Salisbury Square, London, E.C. The offer to annual subscribers necessarily applies only to those sending their subscriptions direct to the Publisher at this office.

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BENT IRON WORK

CHAP. VIII.—PHOTOGRAPH, PICTURE, AND MIRROR FRAMES—EASELS.



WITH Photograph Frames and Easels no particular descriptions are necessary, but a few hints may be given as to the different modes of fixing. The curves of Fig. 53 can easily be bent, and the Frame built up; but the amateur will at first be somewhat at a loss to know how to fit in his Photograph, and how to provide a Back Support for the article.

BACK RESTS.

It must be frankly admitted that it is rather difficult to give a satisfactory description of Rests, as almost every different form of Frame must have its particular kind. Hardly any two will permit of being fastened exactly in the same manner, and in this branch of Bent Iron Work an appeal to the reader's judgment and inventive genius must be made.



FIG. 53.



FIG. 54.

A Back Rest may either be hinged, or fixed permanently at a set angle. The former method is better, as it is the orthodox plan, but the latter is more easily done. Fig. 54 represents a fixed Rest for the Photograph Frame which has been illustrated. The Rest itself is quite simple, and attention need only be drawn to the fixing parts. The plan is this—take a straight slip of Iron the required length, and bend the two extremities like Fig. 55. The strip is fixed to the back of the Frame, the ends serving as Collar Bands at the top and bottom of the inner oval shape. After these are firmly clamped, there will be just sufficient space between Frame and strip to permit the

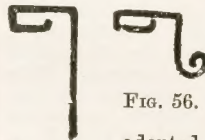


FIG. 56.

FIG. 55. adopted with almost any Frame, the worker's chief care being to choose suitable places for fixing, and to clamp everything tightly.

Photograph to be inserted. Small clips like Fig. 56 may be clamped at each side; these will hold the picture steady.

This method may be

HINGED RESTS.

To hinge a Rest is what may truly be called a "ticklish" undertaking. It is difficult to describe in writing, but the attempt shall be made. Instead of fixing on an upright straight bar behind the oval part of the Frame, clamp on a horizontal one. Before doing this, however, turn to Fig. 57. Bend two slips in the form of A, and fix them on the cross bar as shewn, about one-quarter of an inch apart. Then take the upper end of the Rest (the Rest may be ornamental or plain) and bend it as B. Place the B

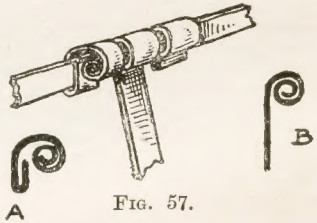


FIG. 57.

the two clips, and pass a stout pin or a piece of strong wire through all three scrolls. This will form a hinge. Move the Rest back and forward, and coax the clips into a suitable position till everything works smoothly. Then add a touch of Solder to the clips; also to the pin, so that it may not fall out, and the task is accomplished.

For the clips it is better to use Tin or Copper, unless the article is of a large size. These materials are more easily bent into a proper curve.

On most published Patterns there are indications as to how Rests, etc., should be fixed. As a rule, it is safer to adopt a simple method. Elaborate pieces of mechanism are very apt to get out of order.

For holding the Photograph in position, small clips like Fig. 56 will be found to give a secure catch; and they may be placed so as to do service as ordinary Collar Bands.

EASELS.

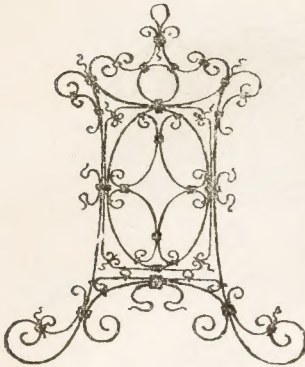


FIG. 58.

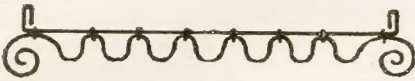


FIG. 59.



FIG. 60.

Both are similar in method; there is a straight slip of Iron, which is clamped at each end to the outer strips of the Easel. No difficulty will be experienced in this, but the straight slip must be cut to the exact size.

A simpler plan is merely to fix on a couple of catches like Fig. 61, and let the picture rest on them. A third way is to make two clips like Fig. 62; and on these may be laid a flat strip of Iron with turned down ends. (See Fig. 63). This plan makes the article like a regular Easel, as the clips take the place of pegs, and the flat strip serves as a Rack.

Other matters connected with the construction of Photograph Frames and Easels call for no special remarks.



FIG. 61.



FIG. 62.

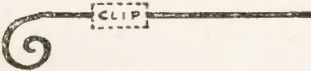


FIG. 63.

LARGE FRAMES.

For Mirror and large Picture Frames a solid Iron groundwork must be secured, otherwise, it would be unsafe to insert glass. Suppose that Fig. 64 is the design for a Mirror Frame, the silvered plate of which is to be 20 inches by 12. The framework here should be of Iron five-eighths inch wide by three-sixteenths inch thick, and must be strongly fixed at all four corners. The simple inner border may be of narrow Iron, say three-sixteenths inch in width. When fixed on it will keep the glass from falling out in front. The outer border should be of three-eighths inch Iron. Both borders must be riveted to the Frame, and the other joints clamped as usual with Collar Bands. Three or four Rivets on each side will be found sufficient.

All these directions are equally applicable to Easel Rests. With Easels, however, there is the front Rack to be considered. The most convenient form of Rack for Fig. 58 is such a pattern as Fig. 59 or Fig. 60 (These are purposely drawn to a larger scale.)



FIG. 64.

When the glass has been laid in it will require a wood backing. This will about fill up the five-eighths inch space, and several stout clips may then be riveted to the back of the Frame, and will thus keep everything tight behind.

If a Picture were used instead of a Mirror, the framework could be made lighter, as clear glass is thinner, and therefore not so heavy. When there is no inner border, such as is shewn in Fig. 64, small clips must be riveted to the Frame in order to hold the glass and Picture in position. A narrow Ornament, however, is preferable.

The same general instructions apply to circular, oval, and other shapes of Frames. When these are of any large size, a strong skeleton groundwork is absolutely necessary.



FIG. 65.

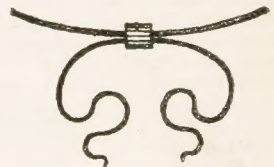


FIG. 66.

Figures 65 and 66 indicate the detail of the little tendril Ornaments which are shewn on some of the sketches in this chapter.

(To be continued.)

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WOOD CARVING FOR AMATEURS



CHAP. I. INTRODUCTORY.—WOOD.



It is necessary, at the outset of this short series of articles, to state that any hints and instructions which are thrown out cannot be intended for professional craftsmen, but are merely for amateurs. Regular Carvers go through a long course of systematic training, and, by experience and practice, gain that knowledge and skill which books on the subject could never hope to give. Thus, any hero of the Wood-Carving Art, who is making a fortune by his genius and dexterity, and who happens to cast his eye over these pages, will kindly refrain from smiling if he finds certain points treated with seriousness, which he would probably regard as quite insignificant.

AN ART AND A CRAFT.

Wood-Carving may be divided into two great branches—the Artistic and the Mechanical. These terms, however, should not be misunderstood. Every artistic piece of work requires much technical and mechanical skill; and any mechanical example of Carving will have a tame and uninteresting appearance if it shews no trace of artistic feeling. The more advanced branch comprises such conventional treatments of ornament as may be found in Italian panels, in French work of the famous Louis periods, and in some modern styles; also the carving of figure subjects, the highest Art of all. To excel here, not only a thorough knowledge of drawing, and a fair idea of clay-modelling are necessary, but also brilliant execution; and it is only after careful study and diligent perseverance that perfect mastery over all the various tools can be had. In

addition to these acquirements, the Carver must be an Artist, and not merely a skilful mechanic.

The other branch, although less advanced, cannot be called wholly elementary. It includes Incising, flat Scotch and Dutch Ornament, Indian styles, Strap-work, Arabesques, Mouldings, and general Carving where richly modelled foliage is not introduced. It also comprises Chip-Carving, and patterns of Gothic and other geometric traceries. Chip-Carving, however, will not be dealt with in this series, but will be treated separately.

The more mechanical aspect of the subject must be principally taken up in these papers, for the obvious reason that the initial stages may be taught, whereas professional skill can only be reached by individual application; and few instructions on advanced Carving can be of use, except to throw out general hints. It must be remembered, also, that the highest Art cannot be attained until the fingers have acquired perfect technical freedom. A pianist cannot become a virtuoso till he has first practised scales and five-finger exercises; and the amateur Carver must study, if he ever wishes to become a master of the Art.

Wood-Carving is an Art and a Craft;—primarily an Art, but the Craft must first be learned. To master it means the overcoming of all technical difficulties, the understanding of every

Tool—of how much each one can do, and where the powers of each are limited; it means also the knowledge of wood and of how to govern the grain instead of becoming the slave of its caprices.

The Art, on the other hand, comes in when we guide our hands with the

eye and brain. An appreciation of nature is necessary, and must direct the carving of natural forms so that they are produced with force and



ITALIAN RENAISSANCE.

spirit. The Craft, however, must receive attention at the outset. Artistic feeling is a natural gift, and will reveal itself as mechanical skill is gradually acquired. The warning is—not to become too enamoured of mere technical accomplishments, and thus forget the higher attainment.

WOOD.

In Carving, the selection of wood is a most important matter. In Fretwork, a few varieties are found to cut less quickly, and are perhaps somewhat severe on the saw blade, but these are trifling matters, and never seriously trouble one. But in Carving, the worker must never cease to watch the grain; it is his constant enemy, and will rise in rebellion if it is neglected for a moment. To practice on, Yellow Pine wood is the best. It is not the easiest to work with, but for exercises it has several decided advantages. It is cheap, and can be obtained from any local cabinet maker or joiner; it is not gritty, and will not spoil the edge of the tools; and its soft nature presents difficulties which are not easily overcome, but which *must* be overcome, and the worker should learn to face all "grain" troubles from the very beginning. An amateur who serves his apprenticeship in Pine wood will find other varieties much easier to tackle afterwards. Many Adams mantel-pieces are carved in Pine, and then painted white. Gilt frames, too, are often made of this wood.

Kawrie Pine and Sycamore are tougher and more difficult to cut. Lime and Holly are good white woods, but the latter is somewhat expensive, and cannot be had in large pieces. Mahogany is greatly used by furniture Carvers, and is generally easy to cut. Rosewood is extremely hard, and is apt to play havoc with the tools. Ebony is even worse, and should not be tried except on rare occasions. Box-wood is also very hard, but is a favourite with those

who do figure work. Sandal wood, if a suitable piece could be procured, is good for small Indian boxes; it has a beautiful odour, and is therefore pleasant to work with. Walnut, Italian Walnut, and Oak, are common woods for Carving; Oak, however, is difficult to manage, and should not be attempted too soon. Satinwood and Pear-tree are sometimes used, but are pretty hard.

Wood for Carving should be as plain as possible. Figuring has a handsome appearance on flat panels, and where inlay work is introduced; but as the beauty of Carving lies in the *relief*, any streaks of figure, or ornamental knots, will destroy the effect of light and shade. After some practice, the amateur will soon be able to judge of wood from its look. On the whole, a closely and finely grained soft wood is the easiest to carve. If it is too soft and open grained, it will not cut clean, whereas if it is too hard and close, it will spoil the edge of the tool. As in Fretwork, it is simpler to cut across the grain than with it. The reason is that the resistance met with is usually definite and regular. In carving *with* the grain, there is not only lack of resistance, but the fibres have a desire to seduce the tool from the straight path, and thus spoil the work.

All wood must be well seasoned, and free from knots and flaws. It should be planed smooth before any work is started. Pine wood for elementary purposes could be had from a joiner,

or from any ordinary timber merchant, but when serious work is attempted, it is advisable to procure the material from those who prepare wood specially for Carvers. Any variety and size may be had, and as it is expressly intended for this work, there is a better chance of its being of suitable quality. If a particularly soft or closely grained piece is required, most dealers are able to supply it if full directions are given.

(To be continued.)



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We have received the second edition of this useful handbook, which is written by Mr. J. Pocock. The book deals fully with Cylinder, Vertical, Launch, Marine, and Locomotive Engines; it is written in a thoroughly practical manner, and the author's numerous diagrams and sketches greatly add to the interest of the subject. A useful chapter of "Notes" is supplied, and to all mechanics and amateurs who go in for the Model Engine-Making hobby, the handbook may be confidently recommended.

CHAP. VIII.—SIDE SHOWS—*Continued.*

The Performing Dwarf.
Front View.

amusing little trick, with an explanation of its secret, should be of some interest to those who delight in Bazaar work.

From the accompanying sketch, which shows the front view, it will be seen that the Dwarf is a most ludicrous—almost unpleasant looking—morsel of humanity. His head is nearly as large as the rest of his body, and his hands easily reach to the table on which he dances. Altogether he is as disproportionate as it is possible for a human creature to be, and certainly it is not too much to say that did the audience possess the idea that his actual form were of the dimensions represented, the impression left would be somewhat painful.

The side view illustration, however, explains matters at once, and dispels any distressing fears as to the genuine nature of the being's deformity. In a word, the Dwarf's supposed feet are his own hands, while the arms which are exhibited before the audience belong to another man. It is a trick,—not remarkably ingenious, perhaps, but still very effective if cleverly carried out.

A most entertaining Side Show, and one which with a little practice could be undertaken by any two gentlemen, is the performing Dwarf. Some readers may have seen a similar exhibition at variety entertainments, but to many who glance over these pages the idea will be new, and a description of the

Both the gentlemen who undertake this Side Show should have a certain aptitude for histrionics. Unless the performance is well done it will naturally fall flat, and those who attempt it should know how to make themselves utterly absurd for the space of five or ten minutes. The Show must be arranged in some corner where all the onlookers will be in front, and where there is no chance of any over-curious or inquisitive person coming round to the side or back. The table which is used should not be too small, and it must be draped to the floor so that no trace of tell-tale legs and feet may be seen.

The side view sketch makes the Dwarf's secret so apparent that a description is hardly called for, and only a few suggestions as to the "get up" and the performance need be given. The front gentleman must clothe his arms with socks or stockings, and then pull a pair of boots or shoes (ladies' for preference) over his hands. These must fit closely and should be laced up neatly. Only the arms of the rear gentleman are visible; but his task is by no

means easy, as he requires to play into perfect harmony with his superior. He must stand back out of sight, with his head bent down, and his arms kept well up to the armpits of the Dwarf. The draping of the figure must be done carefully. A toga is the best arrangement, as it effectually



The Performing Dwarf.
Side View.

covers the arm-joints, and also hides the second man. If the performers conduct their rehearsals in front of a mirror they will soon discover what drapery is necessary to make the deception complete.

The performance itself should not be long; in a very short time the really "funny" man can cause great merriment, and any unnecessary spinning out would endanger the success of the trick, as the attitudes are somewhat strained, and a slight hitch might reveal everything. The Dwarf should sing a few humorous songs and dance to the accompaniment of music. The endless capers he may cut cannot be enumerated here, but it may be mentioned that he should never omit to take a pinch of snuff,—a comic little piece of business which will provoke great laughter. The rear man should always be very careful with the management of his arms; he must keep time with the music, but should not be too extravagant in his movements, as he cannot well see what the front man is doing. The latter should suit his antics, so far as possible, to his friend's arms. The performance naturally requires a little practice before perfect freedom of action is secured, but with a couple of gentlemen who have some knowledge of this kind of work the entertainment can be made very attractive.



The Head in Space.

Another Side Show on the deceptive principle is "The Head in Space." This is a well-known spectacle at carnivals and fairs, but there is no reason why we should not state how the "wonder" is done. A square mirror must first be obtained, and in the centre of it a circular hole cut which will be sufficiently large to admit a lady's head. This glass is fixed at an angle of about forty-five degrees. Three framework sides must then be made and covered over with some striped material which is arranged so that the reflection is accurately carried through the glass. The top should be covered similarly. Thus, when the head is passed through the hole, all that is seen from the front is a rectangular space *twice* the size of the original, with a head—and nothing but a head—in the centre.

The front of this Show must be tastefully decorated, and a curtain should be fixed up and pulled aside when the head is to be on view. The spectators should be kept a yard or two back, and any disposition to pry too closely into the working of the arrangement should be discouraged. If the lady who has consented to victimize herself can sing, the attraction is much greater, and a penny-in-the-slot idea might be instituted as a means of hearing a song. When she places her head in position, a frill or ruffle must be arranged round her neck so that no sign of the mirror hole is noticeable. A capital effect may be had by attaching a pair of cherub's

wings to her shoulders, and if the lady be naturally possessed of an angelic countenance, the audience will no doubt leave the scene feeling better men and women than they did before.

The whole matter is simply arranged, but care must be taken to have everything neat and accurate, for although no one will imagine for a moment that the lady's head is detached from her body, the deception is rather bewildering, and a few clumsy errors would, of course, utterly destroy the effect.



The Village Well.

A Well such as we have indicated in the sketch can be made as usual with a light framework and canvas painted in distemper colour. The assistance of a practical carpenter might be obtained to fix the roller and crank arrangement satisfactorily; otherwise, no difficulties need be encountered.

The Village Well may be used as a "dip," a small sum is paid, the bucket drawn up, and the purchaser allowed to pick out some article. The bucket should be filled with bran, and each article neatly tied up in white paper. An alternative to the "dip" plan is to use the Well as an Ice Cream Stall. Some local confectioner could supply the cream in a freezer, which is placed inside the Well and then ladled out to order. In several large Lancashire towns the writer has made ten pounds in a single day with Ice Cream, but to raise such a sum necessitates hard work. As with all similar Side Shows a great deal depends on the attendant, and any Bazaar lady or gentleman will find that constant energy and ceaseless talk are required to bring about a financial success.

(To be continued.)



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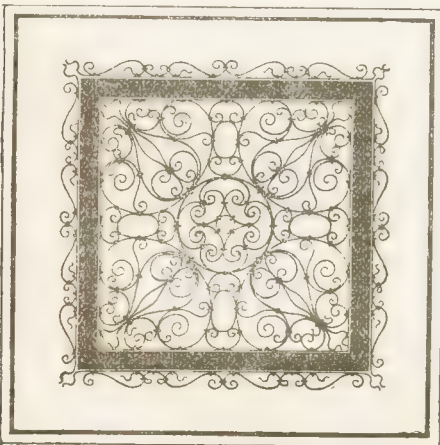
Our last Bent Iron Work Design was comparatively simple, but with this Table Stand the worker's best qualities and capabilities will be called for.

The Pattern is neither large nor elaborate, but the curves and scrolls are numerous; and as the four corners of the ornament are symmetrical, a good deal of care and patience are required in bending the Iron and fitting the pieces together.

That the article will look extremely well when made can be seen at a glance, and dexterous fingers need experience no difficulty in the construction. Strip Iron three-sixteenths inch wide may be used throughout. A narrower strip may be taken for the Collar Bands, or Tin might be used if the worker finds it more suitable.

The border and feet should be of some hard wood, either solid or three-ply. A thickness of one-quarter inch will be found sufficient. The feet are inserted into the border, and the article is thus held strongly together. It will be seen that the insertion holes are effectually hidden by the small Bent Iron borders which are fixed on the sides.

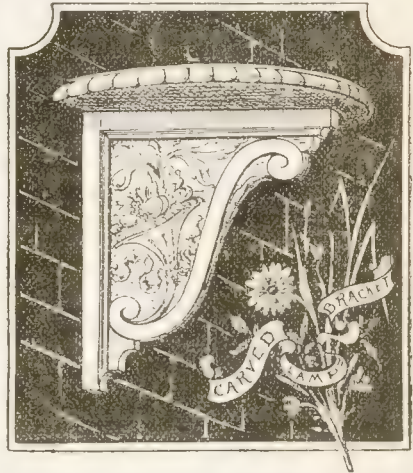
The Table Stand, when complete, must receive a light coat of the black paint. If the rim and feet are of plain hard wood, they should be painted to match the Iron; but if of Mahogany or Oak they could be polished.



[Additional copies of this Design may be had, price 3d. each, on application to the Editor of *Hobbies*, Bouverie House, Salisbury Square, London, E.C. The Presentation Supplements will be given during the current week of publication only, and will not be supplied

with back numbers of *Hobbies*. All additional copies of the Designs will have the Threepenny Coupons, which are available for three months after the date of issue.]

No. 9. CARVED LAMP BRACKET.



The above sketch is a miniature of the full-sized Pattern for a Carved Lamp Bracket, which will be given away with each copy of next week's issue of *Hobbies*.

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CHAP. VIII.—LANTERN LECTURES IN A VILLAGE.

PART 1.



N our village, about 20 miles from London, we are always anxious to do something during the winter to elevate and instruct the villagers, and we are great believers in the meeting of classes and masses. To this end, and for this reason it was determined to have fortnightly Lantern Lectures in the schoolroom. Our schools are voluntary, and are supported by church people and nonconformists alike. In fact, in all matters affecting our village we work with wonderful unanimity.

As these Lantern Lectures are to be given every fortnight during the winter, it was deemed advisable to form a Committee, and Major Good-all-round, a thoroughly practical man, was voted to the chair. It will be quite unnecessary to describe each member of the Committee; suffice it to say that trade and profession, simple and gentle, were alike represented, and that the Committee were fortunate enough to secure as their Honorary Secretary a gentleman who was the proud possessor of an excellent single Lantern of the kind described in previous chapters. This gentleman, with the gallant Major—who practised Photography in the "wet-plate days," and as a consequence considered himself a practical Photographer—formed the Executive Committee. Of course in addition to the intention of giving entertainment and instruction to the residents in the village, great hopes were held out by the Executive of securing financial assistance.

It will be readily understood that such an important question as the arrangement of the season's programme was a weighty matter. The professional members of the Committee put off important engagements, the business men came home early from town, the tradesmen left their counters to assistants or in the hands of their better halves, and nearly all were at the schoolroom by 7 p.m., the hour at which the first meeting was called.

There was no hesitancy about Major Good-all-round in taking the chair. This gentleman had the best house in the village, owned half-a-dozen horses, did not buy at the Stores, was Churchwarden, Chairman of the Board of Guardians, subscribed liberally to all the charities, helped everyone in the village, and

was an all-round popular citizen. The Honorary Secretary, Mr. Bend-at-will, was a gentleman who had the reputation of being "a very clever young man." He wore gold rimmed spectacles, had a far away look, a weak voice with a slight lisp, and although rather timid was always ready to come forward and do all that he could for the advancement of the villagers.

We have said that he was the happy possessor of an excellent Lantern, the use of which he understood so thoroughly that the Committee were in this respect relieved of much anxiety.

Punctually at seven o'clock the Major took the chair, and told the Committee what they all knew before,—the object of their meeting, and, in addition, the fact that their excellent friend Mr. Bend-at-will had not only consented to undertake the onerous duties of Secretary, but would also provide Lantern and "gas" gratuitously, and take upon himself the further heavy work of Honorary Lanternist. This statement was received with much satisfaction, Mr. Bend-at-will being a general favourite.

The next thing was the question of a screen. The Chairman explained that this was really a most important matter; he said that in the old "wet plate days when he practised Photography" they always had a sheet, and after it was strung up, you know, the gardener wetted it all over with a watering pot; he thought that would be the best thing they could do. The Secretary made a mild dissent and murmured something about the difficulties the gardener would encounter in using the watering pot at the top of the sheet, 12 feet from the ground. The business man, Mr. Five-off,—who, by-the-way, was the only man that came in late—said, "Oh! we don't want wet sheets or wet blankets; I was at the Camera Club the other day and they show their Lantern Slides on a white-washed wall; there's plenty of whitewash in our schools; if not, Mr. Distemper is here and he'll soon supply you with some at so much a bucket." (Laughter.) The Major, after a moment's consultation with the Secretary, said that Mr. Bend-at-will had a suggestion to make. The timid Secretary rose and, twiddling nervously with a bit of paper, said:—"Our gallant Chairman had made one suggestion about the screen which he feared was hardly a practical one, and Mr. Five-off had suggested the projection of

Lantern Slides through the optical system on to a white-washed wall. Mr. Five-off had told them that at the Camera Club they show Lantern Slides on a white-washed wall, but he ventured to say that that statement was hardly correct. He was a member of the Camera Club and had taken a great interest in all the very admirable arrangements that had been made by the Lantern Committee of the Club for the projection or showing of Lantern Slides. It was quite true that the Slides were projected on the wall; over the mantelpiece in the large room of the Club a space about 8 ft. square had been carefully prepared with Parian plaster, the surface rubbed down until perfectly level, and afterwards elaborately treated with a preparation of Zinc white, with the result that pictures were better shown at the Club than anywhere else. The surface of the walls of the school-room would be most unfitted to be so treated, even if the Committee were justified in going to such an expense. He trusted they would excuse his having spoken at such length, but he was very glad to have had the opportunity of informing the Committee of the method adopted at the Camera Club."

The next speaker was Mr. Distemper, who said:—"I think as Mr. Five-off was a-takin of me off a bit about that 'ere white-washin job. We don't want any outside white-washin jobs in our village, but Mr. Major, if you'll excuse me, and these 'ere gentlemen 'll pardon me a-puttin my spoke in the wheel, as I was a-sayin I got a suggestion, and more'n that I'll put you a screen for nothink as'll last this 'ere village of our'n until we're all in the Churchyard, or leas'tways the Cemetery, t'other bein full. Well, as I was a-sayin, I'll make you a screen, and as I aint a-go in to patent the idea or get Mr. Five-off to get me up one of 'is Companies, why here it is—see them there two rafters; well fust, I'll just fix up a couple of good strong iron brackets, and then I'll put a pole right acros't, and then I 'as a 'nother pole down here underneath, and I puts a rope on that as goes along, on top of that 'ere other pole, as pulls up this 'ere pole, as I was a-saying; and here you are. Look here Mr. Major and gentlemen, I knows you don't know what I mean, but I knows what I means, and all I 'as to say is this here,—I'll put you a screen free, gratiss, for nothink, as 'll be ever so much better nor whitewash, and

which 'll do all 'as Mr. Secretary wants. I can't say no fairer than that."

The Chairman got up and said that:—Mr. Distemper was one of those thoroughly practical men who saw what was wanted at a glance, and the Committee were greatly indebted to him, not only for his explanation as to what he intended to do, but also for his promised gift, which, now that the Lantern had become such a necessity, would be a great acquisition to the village.

The professional member, a retired doctor and scientist, Professor All-head, rose and said:—He would not occupy their time for more than a few seconds as he knew well how valuable to most of them time was, but he did not like to be a member of a Committee as a nonentity, and he had two offers to make. The first was a practical one; he trusted that the Committee would accept from him Cylinders for oxygen and hydrogen gas with the necessary regulators and accessories for the use of the schools; he knew his young friend Mr. Bend-at will would be prepared with his own Cylinders, but he felt that the Committee should be independent in this particular, and further that he did not think they ought to allow their Secretary to be at the expense of supplying gas for the lectures. He might add that the matter of size of Cylinder, &c., and all other details be left with every confidence in the hands of Mr. Bend-at-will (applause). The second offer was that it would give him pleasure, on any evening they might fix upon, to deliver a lecture upon Popular Science, which he would do his best to make interesting and within the understanding of a village audience.

The Chairman thanked Professor All-head and said that so far nothing but success had been met with; they were now equipped with Lantern, Lanternist, Screen, and Gas. He thought it would be well if they left the arrangement of a programme of the lectures till the next meeting, which, if convenient, should be during the week—say Friday. He thought then the lectures might commence next Monday week.

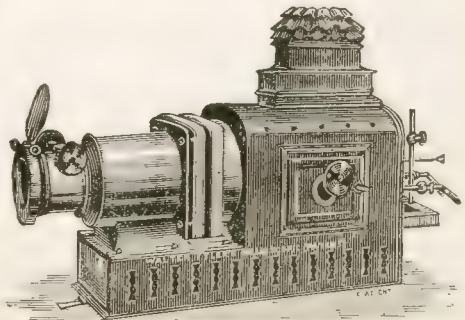
A discussion followed and ultimately it was decided that the lectures should be given on each alternate Wednesday; and the prices,—popular prices—were fixed at 6d., 3d., and 1d.

(To be continued.)

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B. E. LEE.—You can procure Gutta Percha for the Accumulator from any Electrician. The cost is trifling.

DYNAMO.—We may have a few articles on Model Engine and Boiler Making later on. Meanwhile we recommend you to buy "Model Engine Making," by J. Pocock. (Swan, Sonnenschein & Co., Paternoster Square, London.) Your other queries are receiving attention.

"MENTRA."—1. The two compartments must be quite separate from each other. 2. The Accumulator may be safely carried in the pocket. 3. Some articles are in hand describing such a switch as you mention. 4. Charging from Dynamo instead of Battery is rather too long to describe in this page, but we shall consider your suggestion.

A. ELLIS.—Dynamos are made to output and definite measurements as to which you give no clue. Having worked the castings up you will have to wind the armature and fieldmagnet. The whole subject is really too large for correspondence, but you will find full information in a little book, entitled "The Dynamo; How Made and How Used," by S. R. Bottone.

FRETWORK, CARVING, &c.

R.E.S.—In reply to "C.B." in *Hobbies* No. 2 we gave instructions as to the straightening of warped wood.

T.D.—Use French Polish, which you can get at any Cabinet Maker's, or from any dealers in Fretwork Materials.

T.B.H.—Full instructions for sharpening Carving Tools will be given in Chapter IV. of our "Wood Carving" series of articles.

J. WEIGHTMAN.—When ordering Fretsaws, mention specially that you wish Metal ones. These are made with the teeth closely set, and will cut Brass well.

H. PORTER.—We expect that the Weekly Presentation Design in *Hobbies* No. 11 will be a Fretwork Photo Frame. The Design will be quite novel.

PERUSER OF HOBBIES.—In our Fretwork Series of articles we shall devote a chapter to the uses of waste wood. Your other question is too comprehensive for this page.

A. CONSTANT READER.—If you wish a bevelled Mirror of a special size, your best plan is to apply to one of the large local glaziers, where you will get exactly what you want.

G. W. DAVIES.—White Mahogany is similar to ordinary Mahogany wood in grain, but has a rich yellowish-white colour; it is very suitable for Fretwork. We have noted your kind suggestions.

FRETWORKER.—To copy Fretwork Designs, buy a sheet of transparent tracing paper, which may be had from any large stationer or from an artist's colourman, lay this on the pattern, and trace the outline with a sharp (but not too hard) pencil.

A.J.S.—(1) Cases for holding Carving Tools are usually made of green baize, covered with black American cloth, and should be fitted with pockets to hold each tool. A full description is hardly possible here, but we shall see that it is included in our Wood Carving series. (2) You can obtain ready-made white wood boxes for Carving, Painting, etc., from almost any fancy dealer. If they do not stock them, they will be able to procure them for you.

NUMISMATICS.

T. A. WILLIAMS.—We shall certainly have a series of articles on Coins, but you must give us time.

BENT IRON WORK.

H.J.T.—You can get a specially prepared "dull, dead, black" paint from any dealers in Bent Iron Work Materials.

MISCELLANEOUS.

F. BREW.—We cannot trace your first letter. Please send us your address.

STAMPS.

C.E.B.—See reply to "C.M." The penny reds with stars in upper corners have no plate number.

SMUDGE (Woodstock).—Have you not made a mistake? We know of no English half-penny stamp with letters "V.R." in top corners.

C.M. (Huddersfield).—The letters in the corners of your 1d. red English are of no importance whatever. The plate number determines the value.

A.C.O.H. (Forest Hill).—The subject of varieties of paper will be dealt with almost immediately in the "Beginners" column. To answer your questions fully here would require too much space.

PHOTOGRAPHY AND LANTERNS.

NERO.—At some future date we may give such particulars as you require, but cannot spare the space at present to the subject.

H. J. W. BRAY.—We would lend you either set of Slides for December 9th, but shall have to ask you to return them at once after use, as we have many uses for them.

ALEX. GEDDES.—A set of Slides, "A Bunch of Primroses," with the poem, by G. R. Sims, has been sent you, 6d. covered the postage. In future, in order to save delay, put on the envelope "Photographic Editor."

* * As we are obliged to go to press nearly a fortnight before the date of publication, we must ask Correspondents not to be disappointed should answers to their queries not appear so soon as they expected. In every case we shall endeavour to supply an answer in the first possible issue.

FOR Sale, and Exchange.

*. The charges for advertisements (prepaid) in this page will be sixpence for every twelve words or less, name and address inclusive, and one halfpenny for every additional word. Single letters, initials and figures are each counted as a word; but undivided numbers (as 152), and prices (as 10s. 6d.) count as only one word each. In every case the name and address of the advertiser must be given for publication, and we cannot at present undertake to supply a private name or number and receive replies to advertisements at our office. All advertisements must be accompanied by remittances, otherwise they cannot be inserted. Whenever possible, payment should be made in Postal Orders, and not stamps. Letters should be marked "Advt.," and must be addressed to the Publisher, *Hobbies*, Bouverie House, Salisbury Square, London, E.C.

NOTE.—Trade Advertisements can only be inserted in this page at the rate of one shilling per line.

Bargain.—Junior Bicycle for sale, good condition, new tyres, £1. G. Shiers, Lexden, Princess Road, Bournemouth.

Beginners send for one of my cheap approval sheets, Frank Barker, 28, Ellison Place, Newcastle-on-Tyne.

Cheap Typewriter wanted in good working order, send particulars. Silver, Letcomb, Wantage.

Climax Fretsaw, new (Skinner's), Designs and Tools. What offer or exchange? T. Randell, Sands, Swindon, Wilts.

Coins.—What offers for a Rose Noble, a gold coin the size of a florin issued 1344, very scarce.—Address, T. Henry, 1, Pearson Grove, Leeds, Yorkshire.

Collie.—For sale, a grand champion-bred Collie Bitch Pup, sable and white; should make a winner; age six months. If sold at once the low sum of two guineas will be accepted. Particulars, pedigree, etc., from Chas. Smith, Milton House, East Dereham. C. 2.

Electrical Hobbies.—Write for New Enlarged List; will just suit you; prices low; best quality.—Electric, Lord Street, Openshaw, Manchester. C 3.

For Sale, 550 different stamps. What offers? K. Chadwick, Ashfield, Burley, Leeds.

Fretwoods.— $\frac{1}{2}$ inch Canary wood, 3 $\frac{1}{2}$ d. per ft., Walnut, Mahogany, Oak, Cedar, 4 $\frac{1}{2}$ d. per ft.—T. Carter, Lichfield. D. 4.

Fretwork.—Wanted, good fretwork machine, in exchange for pair blue dragon pigeons, winners, or sell 15/—W. Young, 14, Gloucester Terrace, Gloucester Street, Cambridge.

High Class Tools.—For New Illustrated Price List, send 3d. to Osborn Brothers, Tool Merchants, 48, Fratton Street, Portsmouth. M. 3.

Lanterns.—Dissolving view lanterns and 24 hand painted slides, lighting on lighthouse in storm, and cathedral, with lighting up effects, in wooden box, complete. Price £1 2s.; cost £2 5s.; new, only used once.—Mr. Reed, 50, Wandsworth Bridge Road, Fulham, London.

Pair Norwich Canaries, 7/6; young cocks, 5/-. Useful exchange.—Police Station, Monkton Deverell, Bath.

Photographs.—Realising collection unmounted photographs, Swiss, Italian scenery, cabinets 2d., 8 in. by 10 in. 4d. each; also beautiful specimens colour photography, including Palestine.—Alpha, 170, Upland Road, East Dulwich.

Printing Press. Prints any size up to 9 in. by 6 in. (Makers: Peace & Co., Sheffield). Type and Ink included, 16/-, carriage paid. Guaranteed. Sisson, St. John's Place, Felling-on-Tyne.

Roger Fretsaw wanted. Exchange Induction Coil and Bichromate Battery. T. Bridger, 1, Wilton Place, Salisbury.

Splendid Medical Coil, 25/- Want Fretsaw or $\frac{1}{2}$ plate lens. Watson, Bilbro, York.

Stamps.—Album with 660 good varieties, cheap. Offers. Hughes, Earlstoun, Scotland.

Stamps.—Old collection or loose stamps wanted. Price no object.—Captain Vigors, Bideford. C 3.

Stamps.—For cheapest approval sheets write Northern Stamp Co., Great Horton, Bradford. Agents wanted. D 3.

Stamps.—Oil Rivers, first issue, used. What offers?—Walter Scott, St. Boswell's, Scotland.

Stamps.—Collector breaking up large collection would send selection on approval, or variety packets, 100 6d., 200 1/-, 500 10/-; 1000 25/-; these packets are choice, and far superior to any offered by dealers.—Apply: C. Derham, Oakfield House, Taunton.

Thoroughly Good Hand Dynamo with multiplying gear, cost £5, sell 17/6. J. Course, Royston, Herts.

To Old Book Collectors.—State list of wants to Bailey Library, 45, Streatham Place, Brixton Hill, S.W. Clearing out Library Novels cheap.

Will exchange Fretwork Outfit, 6 pieces, and 8 ft. assorted wood, for good singing Canary. W. L., 16, Alexis St., Brompton, London, S.E.

MIRRORS FOR APHRODITE BRACKET.

Owing to a very large and quite unexpected demand, we have temporarily run out of Bevelled-edge Mirrors for the *Hobbies* Presentation Design No. 2. We are daily expecting a further supply, but as all these Mirrors require to be specially made and prepared, and as the manufacturers will only undertake the work if large quantities are ordered, we must ask our numerous Fretwork readers, who have cut out the Aphrodite Bracket, kindly to excuse the necessary delay in the execution of their orders. We need hardly say that all Mirrors will be despatched as soon as received at our office.

NOTICE TO CONTRIBUTORS.

The Editor of "*Hobbies*" is always ready to receive Suggestions for Articles for insertion in the paper. Any manuscript sent for his consideration must however be accompanied by a fully addressed and stamped envelope. Unsuitable contributions will be returned without avoidable delay, but it must be distinctly understood that the Editor will not hold himself responsible for the loss of any manuscript.



THE INDUCTION COIL. HOW TO MAKE AND USE IT.

CHAP. VI.



ASSUMING the various parts to have been screwed down to a temporary base, the Coil may now be given a practical trial; and to enable this to be done a plan of the connections upon the under side of the board is given in Fig. 19. The ends of the primary wire are represented by the two little brass bolts P 1—P 2 to which they are attached. C 1—C 2 are the nut ends of similar bolts fixing down the two pieces of the contact breaker. T 1—T 2 are the terminals for connecting the Battery to. Holes must of course be drilled in the board through which these screws and bolts may be passed. P 1 is connected to T 1 by a short piece of wire, No. 16; similarly P 2 is connected to C 1, and C 2 to T 2. When the Battery is joined up to the terminals T 1—T 2, the current will flow, say from T 1 to P 1, through the primary Coil to P 2, thence to C 1 attached to the contact spring, by way of the spring and contact screw down to C 2, to T 2 and back to the Battery.

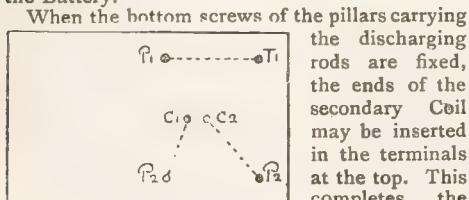


FIG. 19.

connections. The Battery, which should not at first be a very large one, may now be joined up to T 1—T 2, and the discharging rods adjusted by sliding them gradually towards each other until a stream of sparks is seen to pass between their ends. The Coil can then be pronounced satisfactory; and the proper base, or stand, will have to be got ready, and all the apparatus transferred to it.

Figure 20 is an illustration of the Induction Coil, complete in all its various parts; on the base, which carries the Condenser inside will be seen the Coil proper, the contact breaker, commutator, terminals, and for the secondary circuit, the two discharging rods supported upon

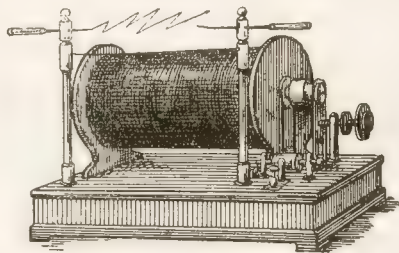


FIG. 20.

their insulating pillars. Although the commutator is shewn upon the base, if used at all it will probably be found more convenient as a separate instrument. It may be joined up in the primary circuit by connecting the Battery to the two spring terminals, and the other pair of commutator terminals to T 1—T 2 on the Coil base by means of short pieces of thick wire. When no commutator is used the Battery will be joined direct to T 1—T 2.

A word or two more must be devoted to the Condenser. The two projecting corners of foil are to act as terminals, or more properly, electrodes, and through each of these and its wood back a hole must be neatly drilled to receive a small brass bolt. A triangular washer of clean, bright sheet brass, made to fit the corner, should be used to protect the foil from the bolt head or nut. A couple of strips of perfectly clean sheet copper, half-an-inch wide and of the requisite length, with a hole in each end, are employed to connect the Condenser between the two parts of the contact breaker. One end of each copper strip is connected to the Condenser behind the wood corner back by means of the two previously

mentioned bolts, and the other two ends are similarly connected to the contact breaker, one to the part carrying the spring, and the other to the pillar carrying the contact screw. These connections must obviously be made on the under side, or rather on the inside, of the base. A shelf, slightly less than half the length of the base and running right across it, is fixed inside; upon the shelf the Condenser is placed, and is maintained in position by being tightly packed with paper.

Referring back again to Fig. 19, the old connections between P_1 and T_1 , P_2 and C_1 , C_2 and T_2 , will have to be made on the new base, but with a clean copper strip in the place of wire. Each strip will have a couple of holes, one at each end, through which to pass the proper screws, and the nuts are then screwed down tightly on the copper, securing all well together.

Perhaps it will be as well to leave the final operation of putting an ornamental covering of velvet, or other material, over the filled up winding space of the Coil, to the taste and fancy of the reader. This done, the Coil will be complete.

Before proceeding to the practical experiments which can be performed with its aid, it will be necessary to give a little further explanation as to the working of the Coil itself. When the primary Current is first started, it induces in the secondary circuit a Current flowing in the opposite direction. On breaking the circuit and stopping the primary Current, a secondary Current is induced of the same direction as the primary. The necessary makes and breaks in the primary circuit are effected by the contact breaker, and occur with great rapidity. The secondary Current induced by a break is decidedly more powerful than the one occurring at a make of the circuit, and these two Currents flowing as they do in opposite directions tend to interfere with each other. When there is a space left between the points of the discharging rods, or other electrodes, as is not infrequently the case, the secondary Current at make is entirely suppressed, and the break Current passes over uninterrupted. Here it is that the Condenser steps in and assists in the suppression of the useless Current. In the primary Coil, too, there is also a certain amount of induction taking place, the primary Current acting upon its own Coil. This action, termed self induction, is also undesirable, and the Condenser lends its aid in neutralising its effects, thereby making the contact breaker vibrate with greater rapidity. It might be thought, too, that the iron core is a very useless part of the Coil. This however is very far from being the case, for the iron very materially increases the induction in the secondary Coil. Further, it is necessary that it be made up of short lengths of wire, for if a solid iron bar were used, myriads of minute Currents would be induced in the substance of the iron, with the result that it would quickly become dangerously hot. The Battery must not be used incautiously, and it is not advisable to employ its full complement of cells at the beginning. First try three or four coupled up in series, and afterwards use as many more as can safely be done, always being guided by the heat developed in the Coil. It is very easy to spoil a Coil by over heating, and it is practically impossible to remedy it when its insulation is impaired in this way.

In the following experiments, the term electrodes must always be understood as the

Conductors from which discharges may occur. Thus, the electrodes may consist of the discharging rods simply, or any other rods or wires from which discharges can take place. With the aid of the air pump to produce more or less complete vacua, the discharges from an Induction Coil can be presented in a most beautiful and striking form. In illustration of this, the electric egg (Fig. 21) may be employed. It is an egg-shaped glass globe, which may be put in communication with an air pump by means of an air passage running up through the stand and controlled by a stop-cock. At the top and bottom of the globe are two electrodes, which, as is clearly shewn in the figure, pass through the glass. The top electrode is moveable so that the distance between their ends inside may be varied; the lower one is fixed. On connecting the electrodes with the Induction Coil by the aid of a couple of wires, and assuming the globe to have been previously exhausted of air as far as possible, a very pretty illumination will take place. If the discharge be sufficiently powerful, the globe will appear nearly filled with a soft red glow, most intense at the end of one electrode and diminishing towards the other one, which is itself surrounded with a halo of blue light.



FIG. 21.

(To be continued.)

Our Advertising Coupon Scheme.

Every copy of our Weekly Presentation Supplement now contains a Coupon which, by special arrangement with our Advertisers, will, under the following conditions, be accepted by the Firms whose names are printed on the back of the Supplement as an equivalent of Threepence in Cash.

Each Coupon is numbered and dated, and will remain good for three months.

The one consideration of any importance is that *not more than five per cent. of the amount of any one order shall be paid in Coupons*. For example, if it be desired to purchase goods to the value of 5/-, it would be sufficient to send a postal order for 4/9 and one Coupon; if the bill came to 10/-, two Coupons and a postal order for 9/6 would be required; and if the amount were 20/-, a postal order for 19/- and four Coupons would need to be sent. Should less than five shillings worth of goods be required, the sender of a Coupon will be entitled to a discount of one halfpenny for every shilling. *Coupons cannot be accepted for sums of less than one shilling.*

Further details of the scheme, with a list of Firms who have agreed to accept Coupons, will be found on the back of the Weekly Presentation Supplement. Two names of Firms have been omitted from this week's Supplement—MANUAL TRAINING and SLOYD TOOL COMPANY, Carver Street, Sheffield; OSBORN BROTHERS, Tool Merchants, 48, Fratton Street, Portsmouth.

Bazaar Side Show Competition.

THE PRIZE SUGGESTIONS.

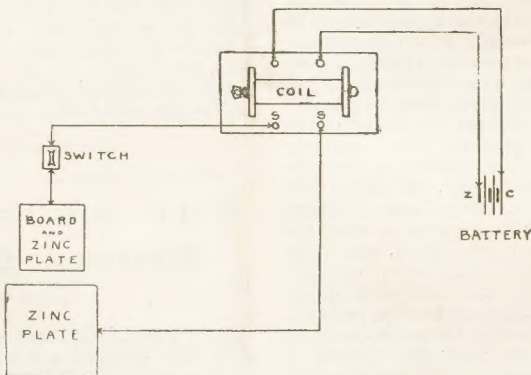
1. "THE ELECTRIC LADY."

By H. J. Hoare, 29, Salamanca Road, Llanelli, S. Wales.

This would be a great attraction to a Bazaar, and could easily be fitted up. The only apparatus required is a Shocking or Medical Coil, which many persons possess.

Having selected a suitable room, get a board about 14 inches square and $\frac{3}{4}$ inch thick; cover it on one side with sheet zinc, and cover the zinc with cocoanut or other matting. Now place this piece of wood on the floor about 3 ft. from the wall, and under each corner put a piece of glass or slate (to insulate it from the floor), putting two screws through the wood into the floor. Then take a piece of sheet zinc about 2 ft. square and place it on the floor 8 inches in front of the other board, and cover this also with a piece of matting larger than the zinc.

Now for Connections; the Coil must be placed outside the Room, and the wires taken along the skirting or under the floorcloth. Run an insulated wire from each secondary Terminal, and solder one to the zinc plate and the other to the zinc-covered board. If a lady stands on the board (which has been damped), and anyone stands on the matting (also wet) in front, and shakes hands with her, they will at once receive an Electric shock. The accompanying diagram shows the general plan of this arrangement.



2. "MOVING MODELS."

By G. F. Prince, 15, Moorfields, Liverpool.

A room is selected with windows facing the busiest street, at the front or side of Hall.

The wall and windows are concealed by thick curtains, arranged as a stage front, and made to open from centre. The seats are arranged in tiers, facing the curtains.

Tickets sold in the large room give a brief description of the Exhibition.

Professor Solphos'

Grand Moving Representation of

Blank Street,

Showing moving models of all sorts and conditions of men and women, &c., &c.

Admission 3d.

After 6 o'clock, Specially Illuminated Electric or Oxyhydro Light.

When the seats are filled the lights are turned down, and after a speech from the Professor (explaining the great expense, &c., of keeping his models in condition), during which the audience are getting used to sitting in the dark, a bell rings and the curtains part rapidly, and the audience see the "moving models" they paid to see in the street itself.

At night a small search light or limelight, manipulated from the balcony or roof, illuminates the street which the windows face, and is in itself an advertisement for the Bazaar.

3. "NEDISON'S ZOETOSCOPE."

By C. H. Green, Norton Villa, Shrewsbury Rd., Harlesden, N.W.

Arrange a screen or partition so as to divide the room about in half, and about 4 feet from the floor cut in it two eye-holes. Behind the partition fix on a bench or table a Zoetrope, or Wheel of Life,

carefully adjusting it so that the figures or scene can be seen when looking through the holes. To the right of, and a little above the eye-holes, cut a slit for dropping in the penny, and arrange a flap to uncover and cover the eyeholes upon slipping in the coin. On the other side of the partition should be fixed a board or slate upon which may be written in chalk the title of the scene being shewn. It will be an improvement to fix glass in the eyeholes, and an arrangement whereby the flap can be retained when raised by the falling coin, and released at will, would be effective. Scenes of a humorous nature should be chosen, and only a limited view should be allowed. The Zoetrope should be kept working continuously, and this can be managed by arranging a belt of string to work from the fly wheel of a Hand Sewing Machine.

Of course more than one Zoetrope can be worked, and the scene changed as often as found desirable.

Good suggestions have also been sent by J. T. Thurston, Brockford, Stowmarket; and T. S. Brooke, 32, Blenheim Road, Gloucester.

PRIZE Competitions

'It is our intention that all Competitions which will be announced from time to time in this column shall be decided by the skill or ingenuity of the Competitors, and not be in any way dependent on chance.

FRETWORK.—MIDGET PHOTOGRAPH FRAME.

Owing to the very large number of articles sent in for this Competition, and to the general excellence of the work, it has been impossible for us to announce the Prizes in this week's issue. We may, however, mention that as many of the Photo Frames are of exceptional merit, we have decided to award *Five Additional Prizes* of ONE GROSS OF THE BEST FRETWORK SAW BLADES. Full particulars of the Competition, with the names of successful Competitors, will be given next week.

Further Competitions for Fretwork will be announced shortly.

LANTERN SLIDES.

For the best Pen and Ink Sketch of a set of three original humorous Magic Lantern Slides we will give Ten Shillings, Five Shillings being awarded to the second best. The subjects are left entirely to Competitors. Sketches should be full size, and should be drawn in Pen and Ink only. The Prize Sketches, if of sufficient merit, will be reproduced in *Hobbies*. Mark "Slides," and send in by December 7th, (to-day.)

INDOOR HOBBIES.

Two Prizes of Ten Shillings and Five Shillings are offered for the best suggestions for a New Indoor Hobby. Paragraphs must not exceed 200 words in length, and in deciding this competition the novelty and practical character of the suggestions will be chiefly taken into account. Communications, marked "Indoor Hobby," must reach us not later than December 14th

FRETWORK DESIGNS

Two Prizes of Ten Shillings and Five Shillings will be given for the best outline sketch of a Fretwork Card Receiver. Size, style, and treatment are left entirely to the Competitor, but the artistic and original nature of the Design will have considerable weight with the adjudicators. Sketches will be returned if a fully stamped and addressed envelope is enclosed. Parcels, to be marked "Design," should reach us on or before December 21st.

PHOTOGRAPHY.

We will give every month a prize of Ten Shillings for the best Photograph, not to exceed 7½-in. by 5-in., and Five Shillings for the second best. The choice of subject is left entirely to the Competitor. Photographs cannot be returned, and we reserve the right to reproduce any of them in *Hobbies*, if thought desirable. Photographs for Competition will be received up to the last day of each month, and those for this month must be sent to our office on or before December 31st, marked "Photo."

The Result of the November Competition will be announced next week.

NOTICE TO COMPETITORS.

All Articles, Sketches, etc., for Competition should be addressed to the Editor of *Hobbies*, Bouverie House, Salisbury Square, London, E.C. The name and full address of Competitor must in every case be sent.

NOTE:—No correspondence can be entered into with Competitors, and all awards made will be final.

THE SWAN FOUNTAIN PEN.

Manufactured in three sizes at

10/6, 16/6, 25/-

HOW MR. HALL CAINE
WROTE THE "MANXMAN."

"Yes, if the fact is of any consequence, you are very welcome to say that I wrote the 'MANXMAN' with the Swan Fountain Pen. It has become quite indispensable to me. I can use it with ease and certainty anywhere, and at any time, even in the dark, in bed, and on horseback.

HALL CAINE."

We only require your steel pen and handwriting to select a suitable pen.

Complete Illustrated Catalogue sent post free on application.

Mabie, Todd, & Bard,
93, CHEAPSIDE, E.C.,
or 95a, REGENT ST., W.



REDUCED F&O-SIMILE.

OTHER TESTIMONIALS.

From MR. RICHARD PENDEREL.—Five hundred thousand words have been written in fifteen months with one "Swan" pen, and without the slightest evidence of wear in the pen.

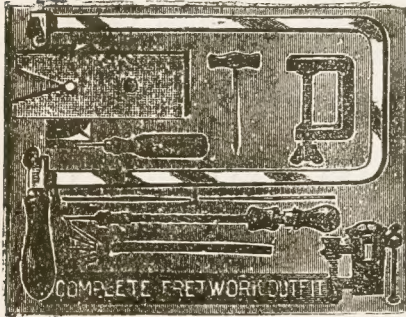
From THE ARCHBISHOP OF YORK, Coatham, Redcar.—Though I have only had your pens in use for a month, I must write a line to say how intensely grateful I am to you for bringing them to my notice.—Yours very gratefully,

W. D. DALRYMPLE MACLAGAN.

“HOBBIES” COUPONS ACCEPTED.

÷ FRETWORK ÷

Complete Outfits for Amateurs.



OUR CARDED OUTFIT, No. 5,

Containing superior 12-inch Steel Frame, Archimedean Drill with six Bits, Iron Vice, Iron Cramp, Wood Cutting Board, Gimlet, two Files, Saw Blades, Bradawl, and Design.

Price complete, 3/3.

Post Free, 3/9.

ECLIPSE BOXES OF FRETWORK TOOLS.

STRONGLY MADE OF POLISHED HARDWOOD.

No. 1. Size 14×12×2 inches, containing 12-inch Steel Frame, Archimedean Drill with three Bits, six dozen Saw Blades, Iron Cramp, Files, Screws, Nails, four Designs with sufficient planed Fretwood, and Fretworker's Handbook.

Price, 5/6. Post Free, 6/3.

No. 2. Size 15½×15×3 inches, containing a superior 14-inch Steel Frame with Tension Screw and Screw in Handle, Archimedean Drill with six Bits, six dozen Saw Blades, six Files, Cramp and Cutting Board, Screws, Hinges, Nails, etc., six Designs with sufficient planed Fretwood, and Fretworker's Handbook.

Price, 10/- Post Free, 11/3.

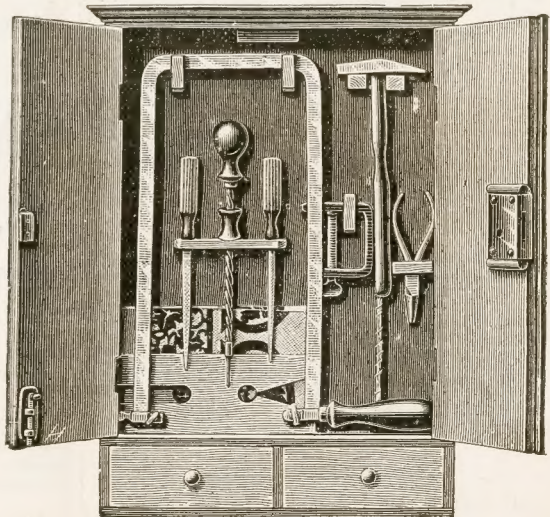
FRETWORK CABINET.

This is at once the neatest, strongest and most serviceable Cabinet for Fretwork Tools which is manufactured. It is made entirely in our own factory, of Canary or American Whitewood, and is beautifully finished. The Cabinet is fitted with all the necessary Tools for Fretwork, and is provided with a lock and key.

Price, 10/- Post Free, 11/3.

SPECIAL OFFER.

Send Sixpence for our New and Greatly Enlarged Catalogue, with which is given away free a Handsome Design for a Fretwork Model of the Clock Tower of the Houses of Parliament, "Big Ben," the published price of which is One Shilling. Send at once 6d. for Catalogue and Presentation Design.



J. H. SKINNER & Co., H DEPT., DEREHAM, NORFOLK.